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United States Patent [19]

Smoot

[11] **Patent Number:** **5,115,230**[45] **Date of Patent:** **May 19, 1992**[54] **LIGHT-PEN SYSTEM FOR PROJECTED IMAGES**[75] **Inventor:** Lanny S. Smoot, Morristown, N.J.[73] **Assignee:** Bell Communications Research, Inc.,
Livingston, N.J.[21] **Appl. No.:** 643,156[22] **Filed:** Jan. 18, 1991**Related U.S. Application Data**

[63] Continuation of Ser. No. 381,859, Jul. 19, 1989, abandoned.

[51] **Int. Cl.⁵** G09G 3/02[52] **U.S. Cl.** 340/707; 340/706;
340/709[58] **Field of Search** 340/707, 708, 709, 706;
358/107; 434/323, 324, 325, 337[56] **References Cited****U.S. PATENT DOCUMENTS**

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A light-pen system for use in connection with a video display installation includes a projector for receiving an externally generated video signal and for projecting a video image onto a screen. Illustratively, the light-pen system includes a source of a beam of radiation for forming a spot at a desired location on the screen. The source of radiation may provide a well collimated visible optical beam or colinear beam of visible and infrared radiation. An adjunct video camera is used to detect the location of the spot on the screen and to produce an output signal indicative of the location of the spot. A host computer or graphics overlay generator receives the position indicative output signal and modifies the externally generated video signal so as to modify the displayed video image.

8 Claims, 3 Drawing Sheets